

REMARKS

This responds to the Office Action mailed on November 23, 2006, and the references cited therewith.

Claims 18, 27 and 28 were amended. Claims 1-30 are pending in this application.

Claim Objections

Claim 18 was objected to because “supply waveguides” should be changed to “supply waveguide”. This change has been made and is not believed to narrow the claim.

Claims 27-28 were objected to because each instance of “cite” should be changed to “site”. These changes have been made and are not believed to narrow the claims.

§102 Rejection of the Claims

Claims 1, 2, 7-10, 12, 15 and 27-30 were rejected under 35 U.S.C. § 102(e) as being anticipated by Tran et al. (US 2005/0018946). Applicant reserves the right to swear behind Tran et al., at a later date, or to provide an affidavit regarding derivation. This rejection is respectfully traversed, as Tran et al. does not show the elements claimed in the same relationship as the present claims.

In Tran et al., the waveguide is supported by a separate cantilever. In claim 1, the waveguide itself is the cantilever as claimed. A first portion of it is supported by the substrate, and a second portion is suspended over an opening. In Tran et al, as shown in FIG. 1, the cantilever is an extension of the substrate and supports the waveguide over the opening. Thus, the waveguide of Tran et al., is not suspended over the opening as claimed and is not a cantilevered waveguide as claimed. Since at least one element in the claim differs from Tran et al, the rejection should be withdrawn.

Claims 2-11 depend from claim 1 and distinguish the reference for at least the same reasons.

Claim 12 contains the same recitation regarding a first portion of the waveguide being supported by the substrate and a second portion suspended over the opening, and thus

distinguishes the reference for at least the same reasons. Claims 13-16 depend from claim 12 and distinguish the reference for at least the same reasons.

Independent claims 17 and 26, as well as dependent claims 18-25 contain the same recitation regarding a first portion of the waveguide being supported by the substrate and a second portion suspended over the opening, and thus distinguishes the reference for at least the same reasons.

The remaining independent claims, 27 and 30 reference a suspended end of a cantilever waveguide, and thus distinguish the reference for at least the same reasons as claim 1. The waveguide in Tran et al. is clearly not suspended, but rather supported by a separate cantilever.

Claims 1-4 and 30 were rejected under 35 U.S.C. § 102(b) as being anticipated by Rines (US 4,414,471). This rejection is respectfully traversed, as Rines does not disclose each and every element of the claimed invention.

Rines describes a cantilevered optical fiber used to detect acoustic waves. Claims 1-4 and 30 describe an optical waveguide, which as described in the application is much smaller, and operates with different characteristics. The inherent size of the waveguides claimed in the present application would make them ineffective as an acoustic wave detector, as it would likely oscillate in response to acoustic waves at or about its resonant frequency, and not directly responsive to the frequency or amplitude of the acoustic waves. Rines specifically states that "The cantilevered beam 20 may be loaded using a mass-loading member 24 to insure that the resonant frequency of cantilevered beam 20 is less than the expected frequencies to be encountered." Col. 3, lines 15-18. The resonant frequencies of the waveguides in the present claims, by virtue of their smaller size are much higher than the acoustic wave frequencies of Rines. Further evidence of the difference between a waveguide, as that term is used in the present application and an optical fiber can be seen in FIG. 2 of the present application, wherein a nano taper 215 is used to interface a waveguide 210 to an optical fiber 110. The optical fiber is much larger, and circular in shape.

§103 Rejection of the Claims

Claims 5, 6, 11, 13, 14 and 16-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tran et al. (cited above). This rejection is respectfully traversed. Since each of the claims depends from a claim that is believed allowable, these rejected claims are also believed allowable. Reconsideration and withdrawal of the rejection is respectfully requested.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6972 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.


Respectfully submitted,

ROBERTO R. PANEPUCCI ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 373-6972

Date 5-23-2006

By 
Bradley A. Forrest
Reg. No. 30,837

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 23rd day of May, 2006.

Name

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